



THE B&O MODELER

Volume 2, Number 1

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**HO Standard Signal Tower Kitbash
B&O Carfloat #199
USRA SS M-24a Cement Service Boxcar
HO Color Position Light Signals**

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Cover Photos – Top, Tower – Greg Larocca photo. Bottom, Carfloat #199 – John Teichmoeller photo.

AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 registered members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their

purpose is to make otherwise unobtainable data available to the membership at reasonable cost.

Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of [annual memberships](#) are available, Regular memberships are only \$35.00. If you would like to join, click [here](#) to fill out our [membership application](#), print a copy and mail it to:

B&ORRHS
ATTN: Membership
P.O. Box 24068
Baltimore, MD 21227-0568

FROM THE EDITOR

I was disappointed missing our November 1 publication date, at first, as I hate to be late and I have a bit of a Type-A personality. But a few positives came of it. I learned to count on others more and to plan better. We were also pleasantly surprised when we were missed and that some inquired about our future. If no one had missed what we were doing, then maybe we weren't doing a good job. I'll assume we are off to a good start. Prospects for 2006 look very good and we hope to get better with each issue. In this issue we have started coordinating with *The Sentinel* by including model

signal photographs related to an article in this year's first issue. Future issues of *The Sentinel* will include historical information related to some *Modeler* articles.

A reminder, we still need an editor for our Model Products News. This is a great chance to communicate with the Society's Model Committee to find out what's new first. As you start a new modeling project, maybe a kit you got as a present, be sure to document your progress and send us some photographs and maybe a brief article.

NEWS FROM THE COMPANY STORE

BY GEORGE STANT

Why should you become a member of the Baltimore and Ohio Railroad Historical Society? Besides belonging to one of the finest railroad organizations in existence, you will also get some nice discounts on the multitude of items that we sell through our Company Store. For example as a Society member, you can save up to 20% on most books over the price we charge to the general public. And on our models, you can save from between 10% and 15%, more with some of the specials that we send out to members. The same goes for the more than 175 reprints of manuals, track plans, and other documents taken from B&O historical records. And remember the profits from these sales go directly back to the Society's ongoing preservation efforts. If you want to learn more about joining the Society, make sure you read "An Invitation to Join the B&O Railroad Historical Society" earlier in this edition of *The B&O Modeler*.

New merchandise being stocked in our Company Store includes:

Stock # 10061 "Railroad Prototype Cyclopedia #12" published by Ed. Hawkins. Volume 12 was printed early October and contains 112 pages. The Society is obtaining a small quantity for resale through our

Company Store due to the amount of information that is based upon B&O prototypes. For example, there is a 45 page article about weighing freight cars. The material is largely written around the B&O. Most of the photos pertain to B&O's weighing facilities and equipment. The book retails for \$24.95. Members can get the book for just \$21.21 which represents a 15% discount.

Stock # 72048 – "B&O Telegraph Stations & Towers with Call Letter Designation – 1948". Last issued January 9, 1948 by the B&O Communications Department. This document identifies the stations and towers on the railroad by division, sub-division, and relay district and gives their corresponding call letter designations. Retail price \$10.00. Member price \$9.00.

Stock # 79501 – B&O Passenger Cars in HO Scale. This reprint was developed from the presentation that Bruce Elliott gave during the 2005 Staunton Convention. The handout has been greatly enhanced with numerous photos from Bruce. The Society has also added several pages of other reference material that would be useful to members interested in passenger service. Retail price \$8.00; members price \$7.20.

MODEL PRODUCT NEWS

EDITOR NEEDED

All models are HO scale except where specifically noted for other scales.

Broadway Limited EMD NW-2 with and without DCC and sound for B&O as road numbers 9512 and 9550 are due January 2006. The EMD F-7 A/B sets with and without DCC and sound for B&O road numbers 231/231X, 233/233X with DCC and 235/235X and 237/237X without DCC are all due April 2006.

Laser Horizons has added many B&O smoothside lightweight passenger car side sets to their catalog since last winter. The car sides are cut to order out of ABS or styrene and are available in N, HO, S, and O scales. The complete list of B&O cars now available is as follows:

Class A-40, plan 7550, 56 seat coach, 1949
Columbian,
Class D-30, plan 7549, Baggage, dorm, coffee shop,
lounge, 1949 Columbian,
Class F-10, plan 7552, 38 seat diner, 1949
Columbian,
Class Z-5, plan 7554, Observation, lounge, with
stewardess room, 1949 Columbian,
Class S-1/S-1A, plan 4072, Sleeper 10-5, pre-War
cars, 4 for the Cap and 3 for the National,
Class S-2, plan 4153B, Sleeper 14-4, B&O's first
ordered post War lightweight sleeping cars,
Class S-3, plan 4167, Sleeper 10-6, C&O design cars
purchased directly from Pullman,

Class S-22, plan 4082, Sleeper 2B, 1C, 1DR, buffet, lounge, observation, purchased 2nd hand from NYC for the National Limited, and
Class PULL, plan 4100, Sleeper 24 duplex L. S. Hungerford leased from Pullman for 10 years.

Precision Craft has three locomotives coming this year for B&O modelers as follows, a P-7 Class 4-6-2, version unknown, with DCC and sound or without DCC and sound. Their web page indicates a November 2006 delivery. An EMD SD-7 with and without DCC and sound, road numbers 761 and 764, due September 2006. Lastly, Baldwin RF-16's A and B with and without DCC and sound, road numbers 851/851X, 853/853X, and 853A due August 2006.

Stewart Hobbies/Bowser will bring us another round of Baldwin AS-16's in the Sunburst lettering scheme, road numbers 6203/6205 without DCC in January and with DCC in May 2006. These are in the new Executive Line and come assembled and with additional details not previously included.

Sunshine Models released a resin kit number 70.4 for the B&O O-59A fishbelly side 52' 6" inside length gondola at the big October Prototype Modelers Meet at Napierville, IL. The kit includes parts for the Duryea cushion underframe. Sunshine sells direct through the mail and does not have a web site or E-mail.

Athearn has announced the release of a newly decorated 40' dry van for B&O in two road numbers for January.

Walthers passenger cars have been very well received. Here are some notes of interest to B&O

modelers on current and future cars. The P-S pre war 10-5 sleeper plan 4072 (Cascade series) is sold out at Walthers. If you still want one try your favorite hobby shop or train show. The Budd 24-8 plan 9540 Slumbercoach is nearing the end of its run and quantities at Walthers are very low. The 12-1 sleeper plan 3410A and 8-1-2 sleeper plan 3979A are on closeout sale at Walthers right now to clear them out of the warehouse. If you want another Slumbercoach or either of these two standard Pullmans get them now.

Walthers passenger car outlook for early 2006 looks like this; the modernized paired window coach A-18?? (near as we can tell very close to the 3660 series) should be available in February and the 28-1 parlor car plan 3416, 10-1-2 sleeper plan 3585, and solarium lounge plan 3975C should be available in May 2006. Both cars are as built but with air conditioning. Remember all B&O plan 3416 parlor cars and plan 3975C solariums except Capitol Square were upgraded, streamstyled, or modernized.

Walthers has sold out of the Rivarossi full 60 foot RPO's (B&O H-10 and H-11) so if you want one get it soon at a hobby shop or train show.

Westerfield kits has temporarily discontinued B&O kit 3150 for the W-1 quad hopper to update the decals and kit and the 8161 O-27a/C gondola because the creased end master has been damaged. Backordering cars will insure these two cars come back into production. Watch for Al Westerfield to announce a series of new B&O car kits in 2006, maybe as soon as the February 4/5 Zaney Show in Timonium, MD.

Raymond Stern

UPDATES AND ERRATA

Some clarifications for the article, "Branchline Trains HO 8-1-2 Pullman B&O Class S-4" in the November/December 2005 Issue of *The B&O Modeler*.

Centabella was withdrawn from lease and service in April 1956 when it arrived at Pullman's Wilmington, DE shop for regular maintenance. The car was placed in storage at the Pullman shop because neither B&O nor Pullman had any requirement for the car. In June 1959 the car was moved from Wilmington to government storage at Granite City, IL. In July 1960 the car was removed from storage and sold for scrap, most likely to Midwest Steel.

Centonia was withdrawn from service and arrived at Pullman's Wilmington, DE shop for regular maintenance in June 1954 and was placed in storage at that location because neither B&O nor Pullman had any requirements for the car. It was withdrawn from lease in April 1956 but remained in storage at Wilmington. In June 1959 the car was moved from Wilmington to government storage at Granite City, IL and in July 1960 it was removed from storage and sold for scrap, most likely to Midwest Steel.

HO STANDARD SIGNAL TOWER KITBASH

BY GREG LARocca

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



Introduction

One of the things that I've always thought was neat about B&O signal towers is how they all look alike along a given stretch of the road's right of way. For example, if you look in *Sand Patch*, the original wood towers at J, Q, FO, SA, GA, CF, NC, and WH were all more or less identical to one another, differing only in the number of side windows the tower had, depending on the size of the plant. Another example is the 1907 Standard Plans booklet, which has diagrams of "standard" signal towers ranging in size from 12'0" x 12'0" (3-window) to 15'0" x 33'0" (10-window). These plans became the basis for the Webster Classics kits, by the way. (Readers should note that these standard towers were slightly different from the standard towers along Sand Patch, having individual, rather than paired, second floor windows.) However, as has been pointed out elsewhere (First Quarter 2002 *Sentinel*), stocking a model railroad exclusively with the Webster Classics towers would be an expensive proposition, even if one could find the kits with

which to do so. An alternative does exist in the Walthers Interlocking Tower kit, which already superficially resembles a B&O tower. The biggest problem with this kit is the right side wall (I am calling the side with the entrance door the front), which has only two windows and an outside chimney, an arrangement that does not match the towers shown in the 1907 Standard Plans booklet. Further, the chimney has no brick detail, being perfectly smooth, which is atypical of tower construction in this country. Since these models are made by Heljan in Denmark, I suspect that the casting is either based on European practice, or, more likely, is supposed to depict a modernized tower, with the chimney flue covered with metal or vinyl sheathing. At any rate, by combining two of these kits, I was able to model a representation of the 12'0" x 21'0" (6-window) standard signal tower from the 1907 Standard Plans booklet at about a third of the cost of the equivalent Webster Classics model. Although not exact, it is certainly close enough for my needs.



The Model

From the second kit, you will need Wall 2 (the six windowed long wall) which will replace Wall 5 (the two windowed long wall) in the first kit. As can be seen in the photo above, the second window from the door end must be filled in to accommodate the chimney. (By the way, if you study my model against the diagram in the 1907 Standard Plans booklet, you will see that mine is a mirror image. I

don't know if the B&O mirrored their towers or not, although it would seem a logical thing to do depending upon the track layout and geography of the tower location.) To do this, I glued the window casting into the wall, removed the sash from the second window, and then cut a filler piece from one of the extra Wall 5's. Make this piece slightly oversize and then file for a tight fit. Glue all windows into the walls, and then assemble the walls.



The waist roof is made from 0.020" styrene, 4 scale feet tall. For the six window tower, the two side pieces are 21.5 scale feet long on top and 22.5 scale feet long on the bottom. The rear piece is 14.5 scale feet long on top and 15.5 scale feet long on the bottom. The front piece is 9.25 scale feet long on top and 9.75 scale feet long on the bottom, and is notched to fit the stairs. Finally, there is an end cap for the right wall waist roof at the stair end which is made from Evergreen 2" x 12", cut to fit. To support the waist roof, I glued Evergreen 4" x 6" on edge, placed directly above the first floor window frames. You'll have to notch the 4" x 6" to go over the vertical framing on the sides. The waist roof pieces are then glued with the bottom resting on the 4" x 6" outer edge and the top resting directly on the structure,

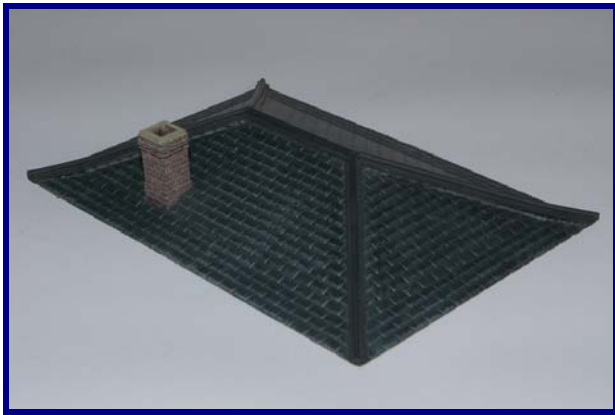
underneath the window sills. The waist roof was then covered with laser-cut, peel and stick fish scale shingles from Master Creations.

The board and batten siding along the bottom of the tower is made using Evergreen 0.100"-spacing board and batten sheet. This was cut 3 scale feet high and to length, and framed with 1" x 8" strip, cut to fit. This was then capped with 2" x 6", glued to the top edge of the board and batten siding. Turning to the stairs, I used a piece of 4" x 6" to fill a gap between the top of the stairs and the second story landing. I cut off the long stair support posts and made new, angled supports from those pieces; they are 5 scale feet long overall, and angled 45° on the ends. Study the photos for placement.



Just for kicks, I added a second story floor, made from 0.040" styrene, and supported by 6" x 6" strips, placed 15 scale feet from the bottom of the walls. I left the roof removable, and dummied up interior detailing consisting of a bank of Armstrong Levers, a desk, chair, and file cabinet. The levers were made by cutting a piece of the board and batten siding 15 scale feet by 1.5 scale feet, framed with 4" x 6", and

then gluing pieces of 2" x 6" on top of each batten. Rods were then made from 0.040" brass rod cut 4 scale feet long. These were glued at various angles in #55 holes drilled in the center of each slot. The rod assembly was placed per the diagram in the 1907 Standard Plans booklet.



The roof itself was modified by gluing a piece of shingle material from the second kit's roof into the notch where the chimney used to go. A new hole was drilled and squared up by filing, with placement being lined up with the window filler piece in the right wall. The kit chimney was then glued in place. The roof caps are 2" x 4" styrene strip cut to fit, and capped with 0.040" styrene rod.



The order board is a piece of 0.020" styrene, cut 2 scale foot square, framed with 2" x 4", glued to a piece of 2" x 6" which is then glued to the window frames as shown above. The lamps are the headlight inserts from an Athearn GP38-2/40-2/50 kit. I glued them in place after painting using Elmer's Squeeze'N Caulk.

Painting

One could probably write a book on what color B&O structures were painted. Other possibilities may exist but I believe the colors that are accurate for

my 1950's layout are peach with chocolate trim. For my building color, I like Polly-Scale Sand, which is more orange than most people use. I like it because it matches very well some paint chips I acquired from the Rockwood station ca. 1978. For the trim, I use Polly-Scale Roof Brown. The order board was painted white with black trim, the lever assembly was painted Floquil Gun Metal, and the office furniture was painted Polly-Scale Pullman Green. I left the interior walls peach rather than trying to paint them a different color. (See Bruce Elliot's article referenced below for a discussion of

interior colors.) The roof was painted to resemble slate using a method Don Cassler taught me. First, paint the entire roof with Floquil Gun Metal. Then dry-brush with a light gray color--Polly-Scale SP Lettering Gray is fine. Finally, buff the surface using powdered graphite. The roof caps are Polly-Scale Grimy Black, and the chimney was painted Polly-Scale Boxcar Red, with the cap painted Concrete, and the mortar lines filled in with a wash of thinned Concrete. The model's foundation is painted Concrete, also.

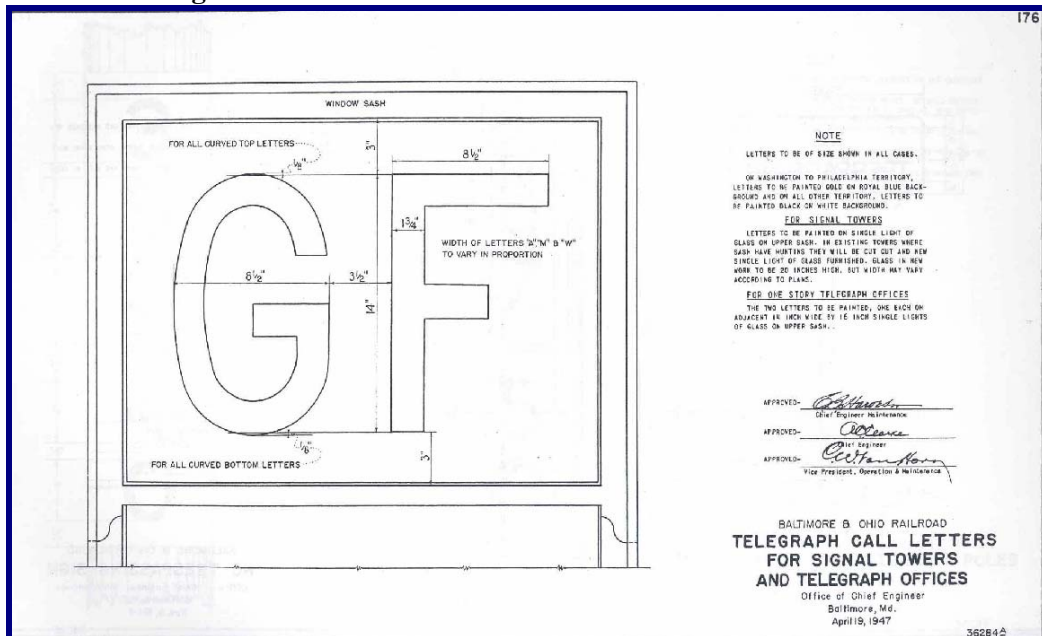
Window glass was then installed, using the kit pieces. Window shades are cut from a brown paper bag, and glued in place with the Elmer's Squeeze'N Caulk. The call letter ("J") was done by putting a decal letter on the *inside* of the window and when dry, painting the inside of the window white. Finally, the model was weathered with a wash of Polly-Scale Grimy Black thinned with 70% Isopropanol.



Other Towers from This Kit:

I purchased three tower kits when they first came out. Using the extra back wall (Wall 3) from kit #2 with the front and back walls from kit #3, I plan on making a 12'0" x 12'0" (3-window) tower. I'll need one more three window side, which I will make by cutting down the six window side from kit #3 in all likelihood. It should be possible to make 4-window and 5-window towers from combining two kits also, by removing material from the six window sides. One *might* be able to do up to an 8-window tower using the extra front and rear walls for the extra windows and siding material needed. Anything beyond that would probably require the purchase of three or four kits, which starts making such a project expensive. When I get my 3-window tower finished, I will share it with you in the pages of *The B&O Modeler*.

Detail for the Call Letter Sign



Baltimore & Ohio Railroad: Standard Plans for Maintenance of Way and Construction. B&ORRHS Reprint. Available at The Company Store.

References

Charles S. Roberts. *Sand Patch: Clash of Titans. Cumberland to Connellsville and branches 1837-1993*. 1993. Barnard, Roberts and Co., Inc. Baltimore, MD.

Baltimore & Ohio Railroad: Standard Plans for Maintenance of Way and Construction. Office of the Chief Engineer, Baltimore, MD. December, 1907. Reprinted 1977 by the Akron Railroad Club, Inc., Akron, Ohio

Bruce Elliot. "HO Scale B&O Interlocking Towers." *The Sentinel*. First Quarter, 2002. The Baltimore and Ohio Railroad Historical Society, Baltimore, MD.

Bill of Materials

2 Walthers #933-3071 Interlocking Tower

0.040" sheet

0.040" rod

Evergreen Styrene:

#4543 Board & Batten, 0.100" spacing,
0.040" thick

1" x 8" strip

2" x 4" strip

2" x 6" strip

2" x 12" strip

4" x 6" strip

6" x 6" strip

0.020" sheet

Master Creations #1002 HO Scale Fish Scale
Shingles

Athearn #46031 Headlight Lenses for GP38-2/GP40-
2/GP50

FRENCHMAN RIVER MODEL WORKS TWO TRACK CARFLOAT KIT, B&O Nos. 199-200

BY JOHN TEICHMOELLER

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



Introduction

For years HO rail-marine modelers have scratch-built railroad barges or carfloats using various techniques including shaping basic 1x6 boards and scratch building deck fittings. Ron Parisi wrote a 3-part article on doing just this back in 1996 in *Transfer*, the publication of the Rail-Marine Information Group (www.trainweb.org/rmig). Then in 1998, Walthers came out with their styrene kit for a three track

carfloat. This kit, weighing 2 ½ pounds and containing many, many pieces of styrene, represented a 38 ½" (279 scale feet) long "transfer" carfloat such as those used in New York Harbor and very similar to the one which Ron scratchbuilt. This was an admirable kit, but because of its size and complexity, many people have complained about its challenging assembly (at least to assemble it and have it look decent). Ron wrote up a wonderful article in the

April 1999 issue of *Railmodel Journal* that tells you how to effectively build the kit.

Carfloats came in various sizes and configurations including shorter lengths and with two instead of three tracks, many of the latter having unloading platforms between the tracks. These are called “station” floats. The longer three-track “transfer” carfloats were typically used to transfer cuts of cars between railroads, such as between the Jersey City terminals and Bronx and Brooklyn terminals, while the two track floats with platforms were used to take freight cars alongside ships or to shore side pier warehouses for cargo transfer. Many of us bought one or more of the Walthers kits with the idea of assembling them sometime in the future, either as designed or in some modified form.

Frenchman River (www.frenchmanriver.com), a small firm that has previously sold resin kits of small harborcraft including a Clyde Puffer, for those who are modeling Scottish waterways, a 34' lobster boat, a 56' fishing boat, and a teeny 45' harbor tug. There was nothing rail-marine in their prior offerings, although if you have a small harbor scene on your railroad, these would help populate it along with numerous other small craft such as offered by Sheepscoot Models. During 2005, Jim and Anna Cleveland, proprietors of Frenchman River, contacted me indicating they intended to produce an HO carfloat kit and requested some back issues of *Transfer* which had prototype carfloat information. While I always welcome new products of relevance to my interests, I was skeptical. This is partly because I get inquiries about potential new products and projects from time to time (like maritime museum schemes) and never see them materialize. Also, as noted, the firm's previous offerings had nothing to do with rail-marine. Finally the location—I mean Nebraska? I know of rail-marine operations on the Upper Missouri River, but the Frenchman River? However, I was delighted to see that not only did this project come to fruition, and not only was it technically well executed, but the execution was of a prototype that is fully consistent with my personal interests as will be explained below. Hey, a B&O carfloat—it doesn't get any better than this. (Well,

maybe.....how about an accurate B&O diesel or steam tug?)

Prototype Information

In the early 1950s, east coast US railroads were beginning to convert their tugboat fleets to diesel power. Many of their old rotting wooden carfloats had been retired and replaced by steel vessels, especially those that received demanding interchange service in New York. However, the B&O in particular still had some wooden carfloats around serving in the less hectic operations practiced on the Delaware River in Philadelphia and in Baltimore Harbor. There is a file in the B&ORRHS Archives containing memos starting back in the 1940s concerning the tremendous costs of keeping these wooden vessels in operation. If you read these memos you ask why they kept putting money into these wooden hulks and didn't, instead, just replace them with new steel vessels. But what the memos in the file didn't discuss was the handwriting that was on the wall—what the traffic figures were telling them, that the whole concept of marine operations might have a limited future given the increase in trucking competition around ports. Therefore, it was a difficult decision to replace wooden vessels with their ongoing heavy annual refurbishment expenses with new steel vessels that required no annual expenses (at least in the first few years) but a capital outlay (and consequent approval by the Board of Directors and the railroad's financial partners). I do not have the Authorization for Expenditure information for exact dates, nor have I tried to get access to corporate minute books (if such is even available) but probably in late 1951 or early 1952 the railroad gave the go-ahead for the construction of two steel carfloats, Nos. 199 and 200, for use in Philadelphia. These were constructed by Bethlehem Steel's Mariner's Harbor yard on Staten Island. They were launched on August 19, 1952 and delivered by commercial tug to Pier 62, Delaware River on August 22. (The Howe Truss float bridge at Pier 62 is still extant behind a Wal-Mart or at least it was last time I was there). Several other new steel barges and carfloats have been highlighted in articles in *B&O Magazine*, (a couple of these articles have been reprinted in *Transfer*) but these have not been so honored.



Good view of stern of No. 199 showing railings on top of bumpers and steps at end of platform. Also, you can see the vertical posts down the centerline of the platform and the transverse diagonal braces at the roof post locations. Even in black and white, you can visualize the yellow deck fittings and the bright orange "Burry's Red Lead" paint below the waterline. John Teichmoeller Collection.

The carfloats were 167' long, 39' wide, and had a registered depth of 9'. They had two tracks with a platform between them. As it turns out, deceased RMIG member John Terpenning had managed to photocopy overlapping 8 1/2" x 11" sections of the major parts of a drawing of this design. This drawing showed the outboard profile and deck plan. He had sent these photocopies to RMIG member Joel Norman who in turn sent them to me in 1994. I managed to piece the sections together. I resized the finished product as an 8 1/2" x 17" wrap-around cover of *Transfer* No. 14 (April-June 1995). My original thought was to build up the Walthers carfloat kit using this design as the basis for a shorter unit, scratch-building the platform. Then several years later, by coincidence, I managed to acquire from a "private collector" the photo album prepared by Bethlehem/Staten Island covering the launching and delivery of the carfloats. Representative photos from this album were published in *Transfer* No. 38 (May-August 2003) as Part 7 of the ongoing "B&O Marine Story." (Both back issues of *Transfer* are still available—see the RMIG website above.)

One or both of these carfloats later made their way to Baltimore Harbor, when the B&O closed down its

marine operations in the early 1970s and sold off most of their equipment. I am told that one or both of these was owned by the marine contracting firm Hughes Bros. within the last five years. I don't know their current status.



Overhead view of 200 and 199 after launch. Note that Royal Blue of hull sides extends several feet back from bow. Then the rest of the deck appears to be coated with a non-skid paint. John Teichmoeller Collection.

Kit Description

The Frenchman River kit is a good reproduction of Nos. 199-200. All principal dimensions agree with the drawings with the exception of overall length which, according to my measurements, came out a little short at 167 feet. Perhaps the 2 foot shortfall is a result of mold shrinkage on these exceptionally large resin castings. The kit has been rendered as a waterline model with a modest load on board, such as load of boxcars, as the freeboard is 5 ½ feet. The prototype is welded, and the resin hull has very nice and fine simulated weld seams. The only other dimension I feel is a little off is that of the hatch covers. The drawings specify 18" nominal dimensions for these. This, I believe is the opening size, and the actual cover itself should be 3" or 4" larger. To me, the covers are slightly but noticeably undersize. They are, however, cast in relief (i.e. the coaming is recessed underneath the cover) and also have representations of hinges, some wonderful molding. I don't know how Frenchman River does this. While you could remove these and replace them with larger disks, I was certainly not about to do this. The track centerline offset is 8' 1" which agrees with

the drawing. However, this is apparently the Delaware River standard, somewhat less than the New York Harbor standard which at least one drawing I have shows as 8' 4 ½". (The New York floatbridges had track alignment jackscrews that could probably span this 3 ½" range, so maybe your model floatbridges should have rails that have movable outer ends, too). The Walthers floatbridge has track centerline offsets of 8' 6" for the two-track entry, so you will either have to make some adjustments or wait for Frenchman River's contemplated floatbridge kit. In addition, there are some minor deviations and omissions of details which will be discussed below and which will probably not bother most people. Another comment about fidelity and this gets technical: the way these barges are fabricated at the bow is somewhat confusing in looking at erection drawings, namely the area where the rake joins the corners of the headlog (the vertical section at the end of the hull). Very simply stated, the kit has executed this wrong. However, the way it is executed it looks fine. Frankly, if it had been executed correctly, it probably would have looked wrong.



Unlike the Walthers styrene kit, this is a resin kit with a relatively small number of principal parts (see photograph above). For example, the hull itself

consists of only two pieces. Code 100 nickel silver rail is, amazingly, cast in place on nice looking chairs. Would it have looked better with Code 70 or

83? Possibly, although not all equipment might roll properly, at least not on Code 70. When painted, the Code 100 looks fine to me. The center platform is rendered in three sections with “legs” cast integrally, and the roof is also three pieces. The platform deck has a diamond tread pattern cast in place. The pattern is larger than scale size but when the model is painted you really can’t see this, and as it is rendered it does give some nice texture. Pewter cleat castings (the proper two different sizes, six of one and eight of the other) are provided. The prototype’s metal plate fabricated bumpers are nicely replicated as two crisp resin castings. The forward and after steps up to the platform are also decently formed resin castings, although they seem a bit cruder than the pewter cleats. Toggle pockets at the bow are cast in place. Flash on the resin and metal castings is minimal. There is some very thin flash that rides up on the web of the rail in some places which I removed with tweezers and a razor knife. In fact, some of it is so fine that I didn’t even notice it until I primed the hull, at which time I removed it.

Let me just make some editorial comments about the choice of prototype. Sure, I might possibly be favorably biased because this is a B&O float. However, I find most modelers tend to regard full-size rail-marine equipment as somewhat overwhelming. After all many of your HO transfer carfloats end up being about 3' long. Typical 100'-110' steam or diesel railroad tugs are longer than a passenger car and can easily be mistaken for O scale models in HO! At 167', this carfloat will probably fit into many layout settings quite well, so I think it was an excellent choice. By the way, these carfloats were all designed so that the center platform could be removed and replaced by a third track. Due to the cast-in-place nature of the tracks on this kit, this would require major work. Before you do this,

however, keep in mind that Frenchman River is considering producing a 3-track version. It should also be pointed out that this kit is NOT being advertised as a B&O carfloat. Why not? Well, despite the hobby industry’s trend toward more prototype-specific models, manufacturers seem to feel that when it comes to anything besides specific freight or passenger cars a prototype identity would stunt sales. Hence, the fact that while Walther’s produced a perfectly fine kit of the Lehigh Valley’s Wilkes-Barre class diesel tug, they never said a word about this in their promotional material and purposely painted it up in a two-tone generic scheme, naming it *Mantis* for their ads. I am not going to argue whether Frenchman River should pick up on this kit’s B&O identity or not. I also cannot say whether any other railroads operated identical craft, but it is possible that they did, particularly the Reading. I just don’t have the detailed fleet data on other roads.

Construction Techniques

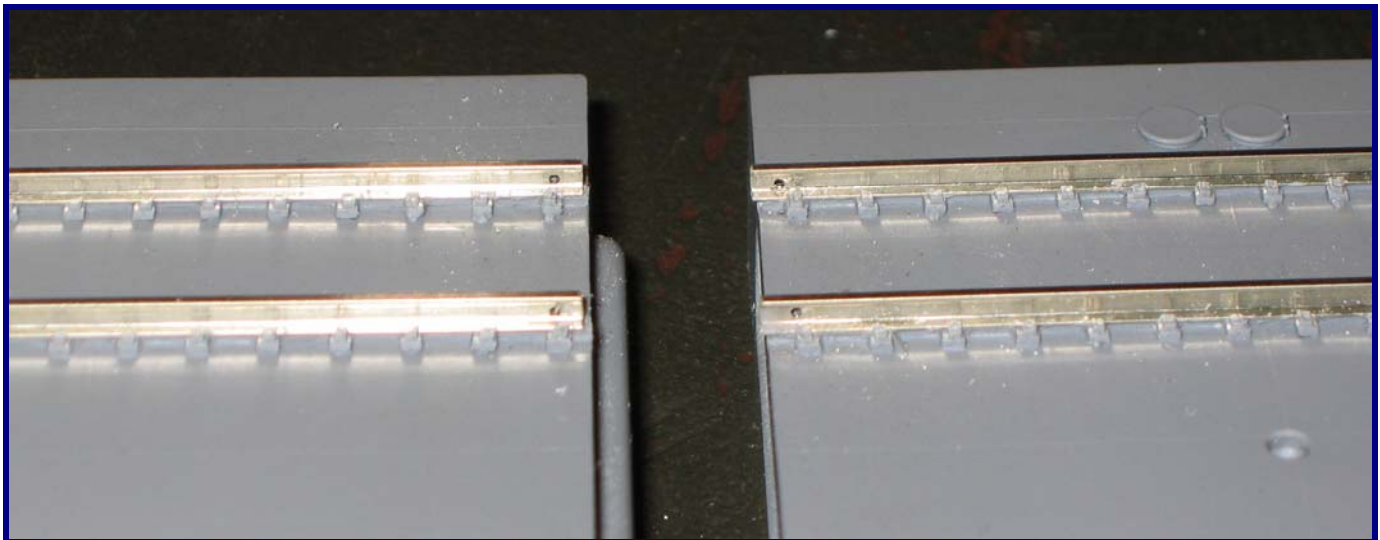
An 8-page instruction booklet is provided, and I find no fault with the descriptions and sequences given. As usual, however, I chose to “do it my way,” which was not necessarily better. I will describe how and where I deviated from the instructions; feel free to learn from my mistakes.

“Scrub”—Step 2 in the instructions calls for scrubbing all the resin parts with an abrasive cleanser like Comet. They mean it. Normally, hot water and dish detergent is sufficient for making resin parts paint-ready; however, Garry Pace did not use the Comet and reported problems with paint separation on the two kits he finished. I used Bon Ami and had a little paint separation when I removed the masking tape—I must not have scrubbed hard enough. So don’t scrimp on this step. If I had it to do over, I’d scrub twice.



Joining the hull sections--Kit instructions call for simply gluing the hull halves together after shaving down the rail chairs at the ends and inserting the included rail joiners. I deviated in two areas here, one which I am happy with, the other which I am not. First, I felt more comfortable with some screws to hold the sections together, so before assembling them I drilled No. 29 holes for a pair of 8-32 screws with nuts that happened to be in the hardware section of

my basement. (See proceeding photograph). Actually I was originally going to use 2-56 screws and drilled out No. 50, and then I realized it was hard to get 1 1/4" long 2-56 screws and didn't feel like making up something with brass rod or tubing. The holes are a little bigger than the 8-32 screws to allow for some adjustment. I also needed to use a Dremel router bit to recess an area for the bolt heads and nuts.



As for actually joining the track, I felt the bulkiness of the rail joiners would be offensive, so decided to drill No. 67 holes and solder 22 gage solid brass hookup wires as jumpers (photograph above). If the thought of drilling 8 No. 67 holes in nickel silver rail with a pin vise makes your fingers feel sore, don't worry, it does mine too. So for this kind of job I use one of my favorite tools, a Dremel palm-size, rechargeable battery motor tool, model 770, type 1. I don't know if this is presently made, but it has wonderful torque, and the battery (I have two) keeps

its charge for a long time. It is an indispensable tool on the layout. (Dremel made a similar cordless small motor tool with a lot less torque, I am told.) MicroMark used to sell this but I got a decent price without shipping by buying it at my local Home Depot. There are other similar battery powered palm drills available. I had some concern that soldering the jumpers would affect the resin rail chairs. But it didn't, and the soldering was accomplished quickly and easily. Having said this, if I had to do it over again, I would have gone with the rail joiners, cutting

them down to, say, 1/4" long. The reason is that they provide absolutely positive lateral alignment of the hull halves. My hull-half alignment, despite my best eyeball efforts, was off slightly, and I used some Squadron Green putty to cover up the goof. (I also used Squadron Green, a material I do not really like, to fill the gaps between the hull sections in the deck.) When smoothing the body putty, I tried to be careful to not obliterate adjacent cast-on weld seams. If I were to do it without the rail joiners again, I would assemble the hull between two boards clamped in my Workmate to make sure the alignment was positive.

Bow Grabs—The photos show a pair of what I call grab irons--although I am not sure what they were used for—at the bow. I made these out of brass wire. (These are barely visible in Waterline view of bow photograph later in the article.)

Bumpers—The prototype's bumpers are basically boxes welded together from plates of steel. There is a circular opening in the sides, represented on the kit's beautiful resin casting as a circular dimple. I mounted a No. 35 drill bit in a pin vise, punched a guide hole in as close to the center of each dimple as I could get and proceeded to drilling halfway through from each side to produce a cored out opening. This only took a couple minutes. I was tempted to set up the drill press but decided I would have more control doing it by hand with the pin vise. The resin is soft and drills easily, so this did not take long. Once the No. 35 holes were through, I slightly enlarged the opening with a succession of several slightly larger bits. Additionally, the prototype has a horizontal

handrail on top. I'm not sure what this was used for, but it wouldn't have been there if someone hadn't suggested it. The resin castings represent this as a cast-on detail. I liked the three dimensional effect of a wire railing (even though it does not protrude that much), so I carefully shaved off the resin detail and replaced it with one formed from .015 piano wire. I used the 1/8" square handle of a file to locate the No. 78 holes evenly on each side as well as a bending jig for the rails. You could also bend the railing and CA it to the bumper instead of inserting it into holes. This is actually more like the prototype which appears to be welded. This is visible in the lead photograph of this article.

Bridge Hooks—Here's where my approach began to become quite time consuming. I contemplated powering the rails somehow and felt one way to do it would be to use a metal mooring line fastened to the metal bridge hooks which, in turn, would be wired to the rails. Accordingly, with great difficulty I drilled diagonal holes from the bases of the bridge hooks through to the underside of the bow. As shown in the next photograph, I used a No. 52 size bit from the top and a larger one, maybe 1/8" from the bottom, because you can't get all the way through with the smaller bit. The challenge was getting them to meet somewhere in the middle. With a good deal of fiddling I accomplished this. Then I drilled a small hole and quickly soldered 22 gage wire to the bottoms of the bridge hook castings, fed the wires through and glued the bridge hooks into their seat with thickened cyanoacrylate adhesive (CA).

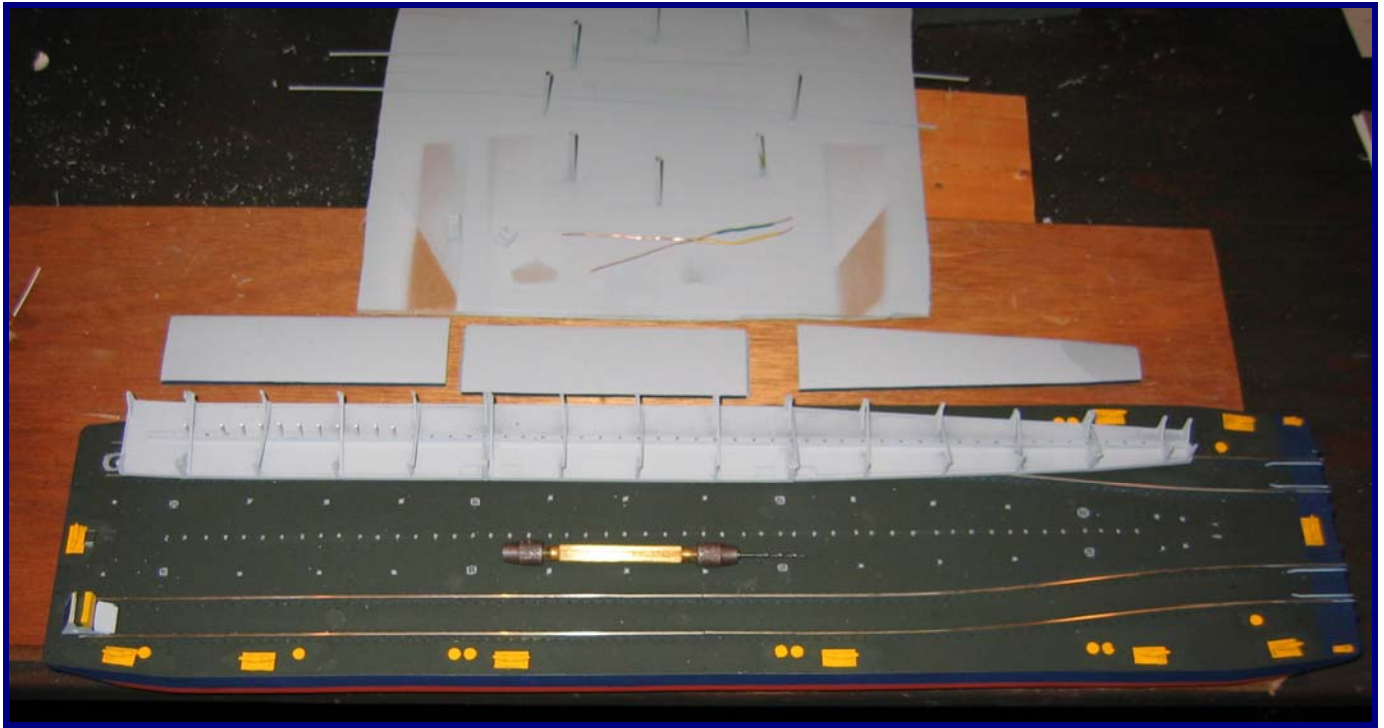


Platform detailing—The drawings of the barge are

fairly crude. They are not really shipyard drawings

but are more like equipment diagrams. Accordingly, not all the details of the actual barge are depicted. Four interesting details really jump out at you when you look at the launching photos taken from ground or deck level. First, there are diagonal braces that are attached to each of the pairs of platform legs and run across the platform. They are attached as alternate diagonals. The second detail is a series of 54 vertical

legs that run down the center line of the platform. The third is a series of carlines, i.e. roof joists, visible under the roof. Finally is the size of the vertical roof supports. The next photograph shows the centerline post holes having been drilled in the underside of the platform and the diagonal braces having been installed.



Diagonal Bracing. After first gluing all three sections of the platform together but **not** attaching them to the hull, I executed the diagonals with 3/64" Plastruct angle I had lying around. I believe I only used one length of it.

Centerline vertical posts. Here is where we start to border on insanity. First of all, I studied the photos and determined there were three verticals between each set of legs. There was also a vertical aligned with each set of legs. Thus the longitudinal positions were easy to locate—one in the center of each section between the legs, one between the center and the legs and one at the leg location. The platform assembly castings have a solid ridge about 1/8" square cast along the centerline, so this provided a base for drilling. I located the centers of 54 holes and used a No. 52 drill in a pin vise. How did I avoid drilling through to the top of the platform? Simple—I drilled until hole until its chip was about 1/2" long. The verticals themselves were lengths of Evergreen HO 4" x 4" (No. 8404). I made them just long enough so

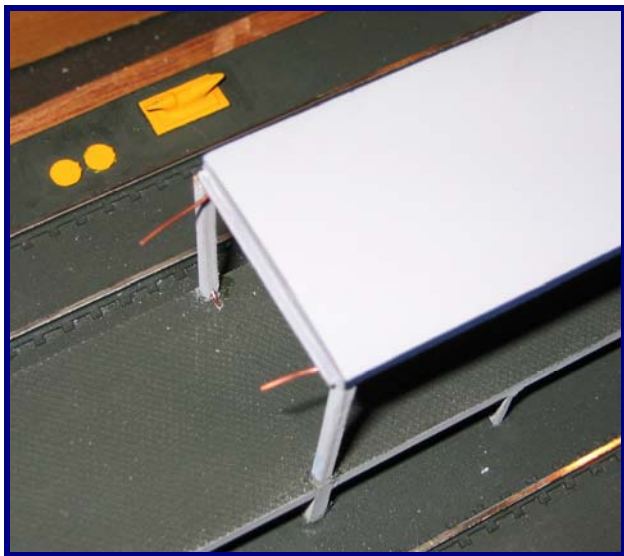
that they would be longer than the distance between the bottom of the ridge and the deck of the float but still short when pushed up into the hole. Later I would mount the platform to the deck, then pull each vertical down with a tweezers, align it, and tack it in place with CA. Admittedly, these really show on the prototype in sunlit photos but are awfully hard to see on the model in typical layout lighting.

Roof Carlines. The roof carlines or joists are visible in the ground-level launching photos. There is one of them at each vertical location and three between. Because of the thickness of the kit roof part, I simulated the carlines by using Evergreen .030" x .030" (No. 131) strips. Because of the thickness of the roof at the two joints, I omitted them there. There is also an electrical conduit that runs down the centerline of the underside of the roof that I plan to add later.

Vertical Roof Supports. The kit provides 1/8" square Evergreen tube as the roof supports. From the

drawings this appears to be the proper size. However, in the photos, these supports are definitely smaller than the 11+" that 1/8" square tubing implies. In fact, they are channels. However, I liked the way the kit was designed with little pegs cast into the platform deck and roof into which the verticals registered, so I stuck with square tubing. Unfortunately, they don't make square plastic tubing smaller than 1/8" so I bought two lengths of K&S 3/32" square tubing and cut them to length using a razor saw and miter box. I ended up only using one length, even after messing up two that I had cut too short.

Power to the Platform—If you look at the photos it appears that there are also running lights attached to the third set of verticals. I am not sure whether these were for the delivery trip or were permanently installed. I did not execute these but wanted to put wiring in place in case I later decided to do so. Accordingly, I drilled a No. 67 hole through the mounting peg seat in the hull and also in the deck at the third vertical location, then ran a length of No. 22 solid wire up through the vertical when I assembled it, notching the top and bottom of the vertical to allow the wire to enter. You can see this in the photograph below. The naked ends of the wire are simply shoved up into the platform roof where they are not visible unless you look hard.



Usual details that I did not add because these particular carfloats did not have them are outboard stanchions, chain railings, and number-boards. The B&O and other railroad's carfloats did have these details, but mostly on three track floats. Ron Parisi's two float bridge articles tell how he built these. Probably they were not deemed necessary on

platform floats because brakemen would use the center platform instead of walking along the edge of the hull.

Painting and Assembly Sequence

Depending on how you want to paint this carfloat, things can get tricky. If you want to execute it in "late era rust," you can probably wait until everything is assembled, then just spray paint it one color. However, the B&O had a wonderful color scheme, and I wanted to start out with a pretty much out-of-the-yard version. I may heavily weather it later. Over the years things changed and there seem to be some deviations along the way, so I went with a combination of the apparent colors showing in the launching photos, a paint schedule on a Wiley Shipyard drawing of a B&O single-track carfloat, and a nice color photo in Tom Flagg's *New York Harbor Railroads In Color*, Vol. 1, page 18. Additional color photos of B&O or at least B&O-style carfloats are on pages 19 and 20 of Vol. 1 and on pages 16, 18, 25 and 29 of Vol. 2.

Primer—After the hull was assembled and the platform sections were assembled and very minor flash removed from the other parts, I spread everything out on newspaper, including two lengths of styrene 4 x 4 for the centerline legs and the 8 3/32" square tubes for the platform room, the three roof sections, the two bumpers and the forward and aft step assemblies and hit it all with a spray can of Rustoleum gray primer. This turned out to be somewhat grainy. The grain is probably good for a later weathered model, but a smoother finish might have been desirable and could have been obtained if I had just used Floquil gray primer in my airbrush. Speaking of airbrushes, go ahead and load your paint in the bottle attachment, not the cup, because you will use a good deal of it.

Hull—A week or so transpired before I could get back to the project after which time the primer seemed pretty dry (at least I couldn't smell it). I then sprayed all the deck fittings with multiple coats of Floquil Railbox Yellow (No. 33). I made a shadow mask out of an 8½" x 11" piece of cardstock with several different sized holes for the cleats and hatch covers since I didn't want to spray yellow paint everywhere. (I also brush painted yellow on the face of the bumpers and the bumper railing.) After the yellow on the fittings had dried well, I made little tents for each of the fittings and manhole covers from masking tape to protect the yellow. I then sprayed the area below the waterline Floquil CN Orange (No. 11). This

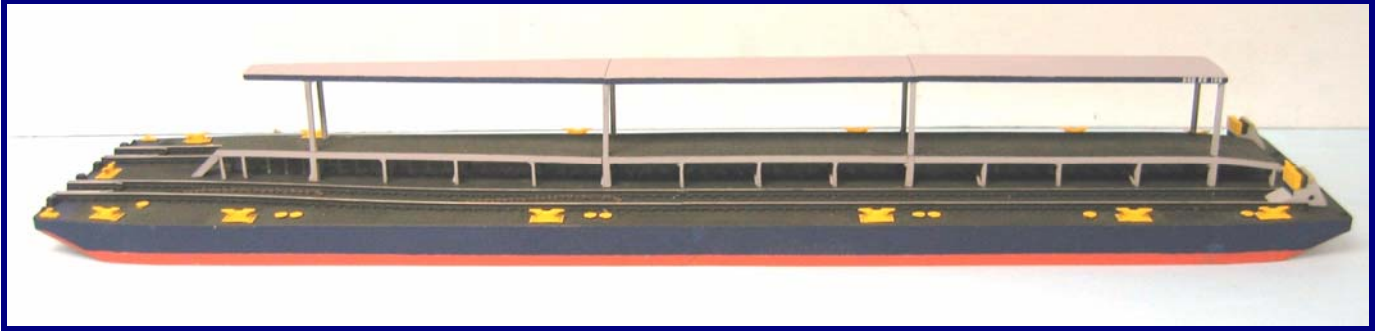
seems to be the closest I could come to what the Wiley Shipyard drawing's paint schedule called "Burry's Red Lead." You can see this color below the waterline of some of the diesel tug photos on Flagg's books, and let me tell you, Lionel got it exactly right on the S-scale tug lettered for B&O's *William J. Dickey* they issued a couple years ago! After the Red Lead had dried, I masked it over according to the lines evident in the launching photos. Note that the red lead extends up the rake to the bottom of the "head log" or the end of the hull. Next I sprayed the sides and ends of the hull as well as the front 8' or so of the deck with Floquil Dark Blue (No. 50), to simulate the paint schedule's specified "Dupont Royal Blue No. 88-5370." I brush painted the sides of the platform roof pieces this same dark blue as well as the back faces of the bumpers. After this had dried, I masked all but the deck as well as the sides of the platform and sprayed the unmasked surfaces with Floquil Brunswick Green (No. 34). This was in lieu of the table-specified "black." This turned out to be a good choice as I am pleased with its warmer tone versus plain black. After carefully peeling the masking tape off (and repairing a few places where paint came off), I went back and brush painted the deck around the yellow fittings with the Brunswick Green. I also brush painted what appears to be a rubber snubber area on the bumper Brunswick Green.

Now it was time for final assembly. I glued the bumpers in place with thickened CA. (I didn't remember to chamfer the tops of the stern rails slightly as on the prototype.) I carefully bent the platform assembly a little bit to straighten it out, then inserted the 54 pieces of 4" x 4" that I had chopped with my NWSL Chopper from the painted strips, leaving them loose. The platform was glued onto the deck, with the holes in the deck perfectly registering with the pegs in the 8 large legs. The platform still had a slight bow and some of the small legs and the ends of the platform did not touch the deck, so I weighted the platform down with a couple of ancient slugs of lead in my toolbox, then tacked the small legs down to the deck with regular CA. Of course before gluing the platform down I scratched away the paint on the deck at each glue spot as well as along the centerline (the bare spots in Photo 6). When the deck was firmly in place, I went back with tweezers and pulled each of the 54 centerline posts vertical and tacked each in place to the deck with thin CA. Well, they aren't all entirely plumb, but I did my best. I went back and painted over the shiny glue spots with Brunswick Green. My platform was not entirely

level; however, in looking at the prototype photos, I see they were not totally straight and level either. The four vertical posts for the center roof section were installed next with thickened CA. Previously I had to shave down the alignment pegs cast into the platform deck and roof slightly to accommodate the smaller size posts. I also had run the feeder wires up from the bottom of the hull before gluing the platform on, as I never would have been able to feed them through with the platform glued down. After the center section had set, I installed the forward and aft roof sections. I was concerned that the verticals might not be plumb. Sure enough, they weren't. This was due to some imprecision in my shaving the alignment pegs. If you use the kit-supplied 1/8" square tube, things will probably line up okay. So I just knocked some of the crooked verticals loose with the side of a pin vise and re-glued them plumb. Then I glued the platform roofs on, starting with the center section. The joints between the three sections are not totally in line, and perhaps I should have done a bit more filing and fitting there. I also debated as to whether I should fill the gaps with body putty to make a continuous roof. I didn't, and then felt better when I saw the photo on page 29 of Flagg's Vol. 2 which shows on B&O platform float with three distinctly different colored roof sections, suggesting there must have been visible seams between the sections. I then glued the forward and rear stairway castings in place. I cut the chain supplied into four lengths and instead of painting it, I successfully located with some effort something that I had a vague recollection of being in my paint box, namely an ancient bottle of "Blacken-It," a chemical that blackens brass (and which is still available). I managed to lose two of the four attaching rings supplied so made replacements from brass wire using another long-lost tool, the Kadee coupler loop adjusting pliers. Along the way I noticed that one of the small legs on the platform was short—either due to casting imperfection or I had knocked the end off—so I had to make an extension from a little section of the 3/64" Plastruct angle. Then I touched up the paint. The gray portions were left in natural Rustoleum spray can primer. Where touch-up was needed, Floquil gray primer matched perfectly. The yellow deck fittings get easily discolored if you touch them with something. For example, the Brunswick Green deck of the platform was lying on top of the port side fittings at one time, so I had to touch them up with yellow again. In studying the photos, it looks like a bit more touch-up wouldn't hurt such as the Brunswick Green around the yellow deck fittings and some of the blue and gray on the platform.

Lettering The font used on these carfloats appears to be something customized by the marine shops. The next best thing for the numbers and letters I could find in my decal scrap box were Walthers White Condensed Gothic alphabets. I am not sure if the prototype's letters were white or yellow. I know they were yellow in later years, but I went with white. The larger numbers on the bumper appear to be 5/32"

high, while the small numbers and letters on the platform roof sides and ends are 3/32" high. There are no ampersands in this decal set, so I kitbashed them from "8s." The B&O herald on the starboard side bumper was a slam-dunk—I happened to have an extra one of these in the decal scrap box, a standard 3' "Serving the 13 Great States." Of course I brushed on a light coat of Floquil Glaze in the areas decaled before applying them.



Overall elevated side view of carfloat. The Floquil "dark blue" appears almost black in some lighting conditions, but even so contrasts with the "almost black" Brunswick Green of the deck.



Waterline view of bow. Note the visibility of the platform leg diagonals and centerline vertical posts from this angle.



Waterline view of stern. Note visibility of roof carlines from this angle and wire grabs on the bumpers.

Final Details and Future Modifications

The last thing I did to the model before making a

traveling box to take it to the B&ORRHS Convention in Staunton, VA was to drill and file out the openings in the toggle pockets. I left this until last because I felt they would be exposed to breakage during construction. Elliott Janofsky tells me he will replace his toggle pockets with the pewter ones from Crow River Products and make them match his scratch-built contained apron float bridge. As noted earlier, I

plan to install a plastic rod as a conduit along the centerline of the underneath of the platform. I may also install running lights, and may also make a "T-style" mast for the end of the platform roof as shows in the launching photos. I did not install the nice rubber tire castings at the stern using the thread supplied, as I think these were only applied for the delivery trip.



View of bow of No. 200 ready for departure for Philadelphia. Note the small "grabirons" on the corners in front of the bridge hooks. This also gives a good view of the vertical posts down the center line of the platform as well as the diagonals at each roof post location. You can also see the carlines under the platform roof. John Teichmoeller Collection.

How long did it take to assemble this kit? I don't know, as I did it off and on in spare moments over about six weeks. Additionally, it took me longer because this was really the first model building of this extent I have done in about ten years, so I had to round up the tools and extra materials. Further, it took some time to figure out how I was going to handle some of the "extra" stuff. But my guess is that if you were going to build the kit up straight without any of the extras, you could probably do it in as little as two evenings (excluding the painting, of course.)

In summary, this kit is a valuable and welcome addition to the offerings available to rail-marine modelers. Frenchman River indicates they will be

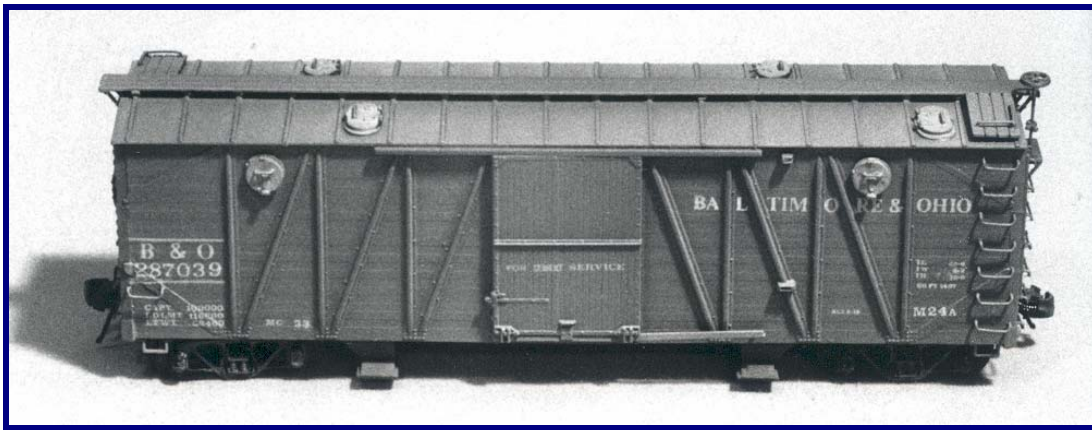
doing a three track version of the carfloat as well as a float bridge to go with it. They are also interested in some railroad tug kits. Is it too much to expect a Howe Truss float bridge (ala St. George or Pier 62 Philadelphia) and one of the Lehigh class diesel tugs? Stay tuned.

Kit Information: Available direct from the manufacturer, although they may now be selling through dealers: Frenchman River Model Works, HC1 Box 185A, Stratton, NE 69043 phone: 308-276-2174, jcleveland@gpcom.net
www.frenchmanriver.com \$125 plus \$15.50 shipping.

USRA SS M-24A CEMENT SERVICE BOXCAR

BY GREG M. SMITH

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



The Prototype

The Baltimore & Ohio Railroad converted 40 of the USRA boxcars, Class M-24, in 1933 to carry bulk cement, becoming Class M-24a. The 500 M-24's (187000 – 187499) were originally constructed by Haskell and Barker in 1919. In 1934 there were 40 M-24a cars, numbers 287000 to 287039. The inside length of these cars was 40'6" with a tare weight of 27 tons. Between 1937 and 1939, 18 were converted at the Washington, Indiana Shops to M-24b. 8 cars were still M-24a in 1939 (287019 to 287038 series

range). By 1957 all M-24a's were gone and only 5 of M-24b's were still in service. The purpose of converting these cars from boxcars was to transport cement in bulk. The conversion involved putting on new roof and sides, adding hatches to the roof and sides, and adding discharge chutes. Sometime in the 1940's the brake system was changed to AB type system and the loading hatches on the side were removed.



Previous Three Photographs are at Mt. Clare Shops, April 28, 1933, B&O RR Photographs, Greg M. Smith Collection

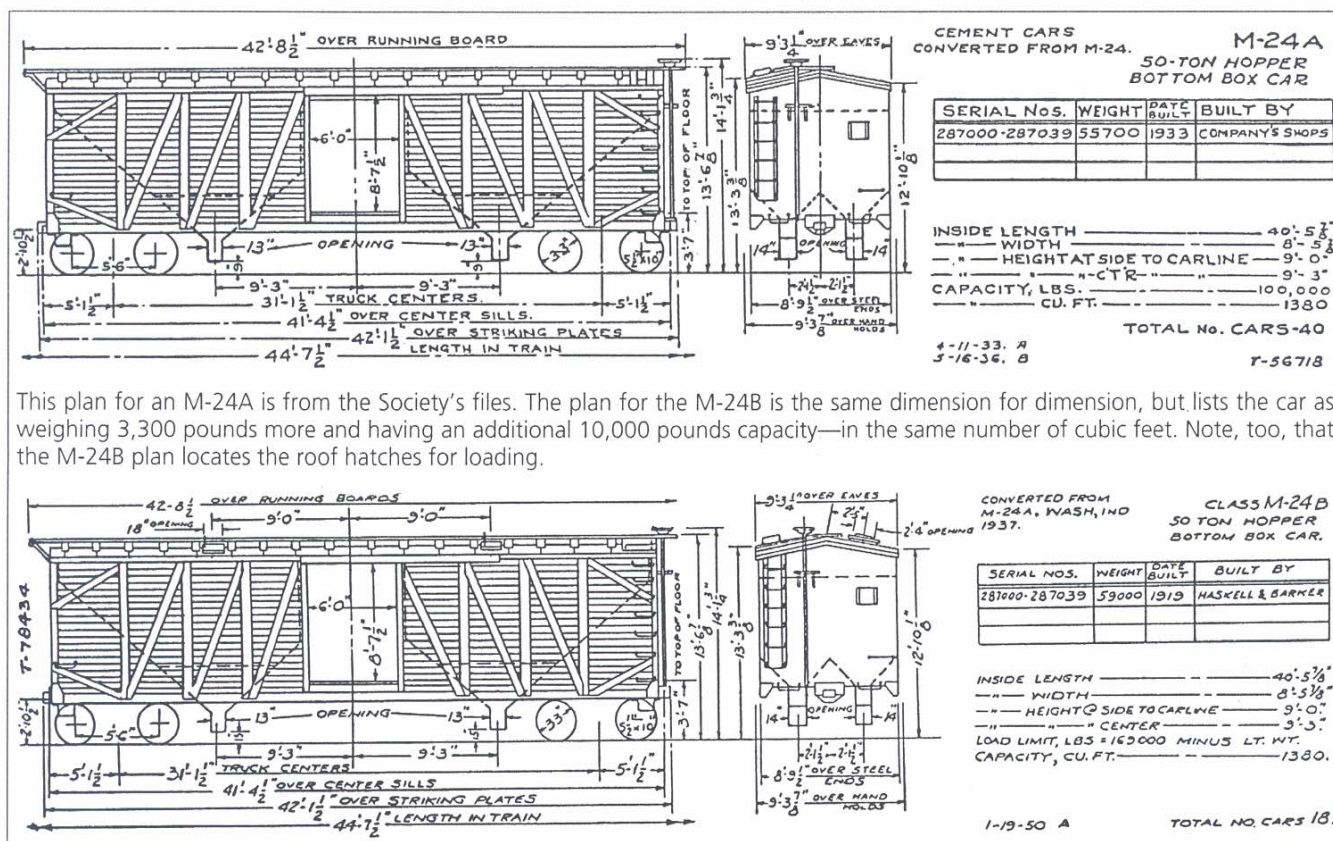


Diagram that appeared with a prototype follow-up article in the First Quarter 2003 issue of *The Sentinel*.

The Model

The inspiration for this project was the release of a USRA cement boxcar kit by Tichy Train Group. After additional research and review of various photographs, it appeared the kit provides a good starting point, but not 100% accurate model for the B&O's M-24a.

The first place to start is the roof. It should be 17 full panels instead of 14 full panels. The original ribs and roofwalk saddles have to be shaved off with the center ridge rib left in place. The roof can then be sanded smooth with 240 grit paper and gouges filled with model filler (white Squadron Putty). After the

filler dries the roof is final sanded with 400 grit paper. New ribs are added by using scale 1"x 2" Evergreen styrene strips starting 5.5" from each end. To space the next ribs properly a cardboard spacer, 27" wide is laid next to the previous rib and the next styrene strip is tacked in place by cement. After placing the ribs on both sides of the roof, the roofwalk saddles are added. For this model I used Walthers roof saddles (no longer available) on the center ridge of the roof at the intersection of each rib. Roof saddles can be represented with Evergreen's scale 2"x 3" strip glued onto each rib as wide as the roofwalk and sanded flat to keep the roofwalk level.



The roof and side hatches are all built from scratch. The roof hatches were formed from layered styrene of .005" and .015" (see drawing & templates). Brass templates were made for the roof hatch pieces, oval shapes to fit between the ribs. The .005" styrene is the base for the hatch and the .015" is used for the lid. The side hatches were made from using a hole-punch on .005" styrene and the lids constructed using a punch made from 1/4" O.D. brass tube. The hinges and catches are made from 1" x 2" strips. Hatch handles are Detail Associates 11" grabs on the roof hatches and hand-formed .015" brass wire 9 scale inches wide on the side hatches. Bolts on the hatch hinges are represented by drilling the hinge and filling the hole with .010" wire and trimmed almost flush. The hinge pivot is .010" styrene rod cut 2 scale inches wide.

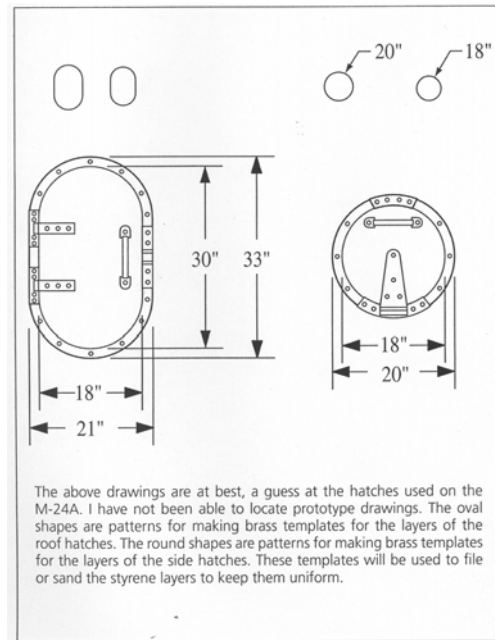
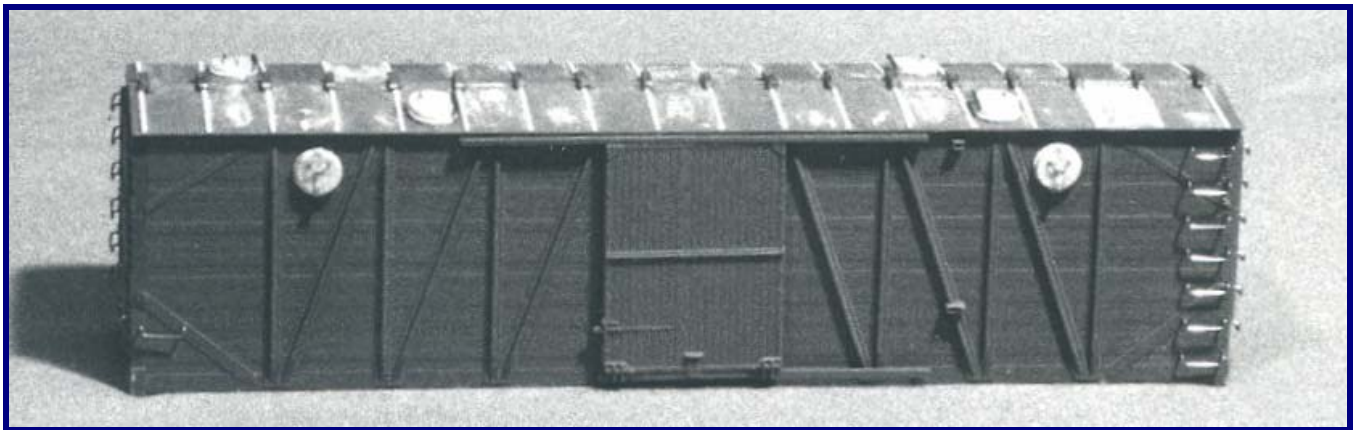
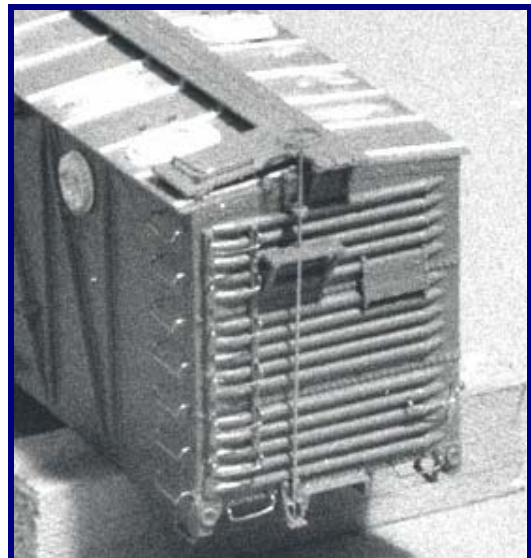


Diagram that appeared in the Fourth Quarter 2000, *The Sentinel*.

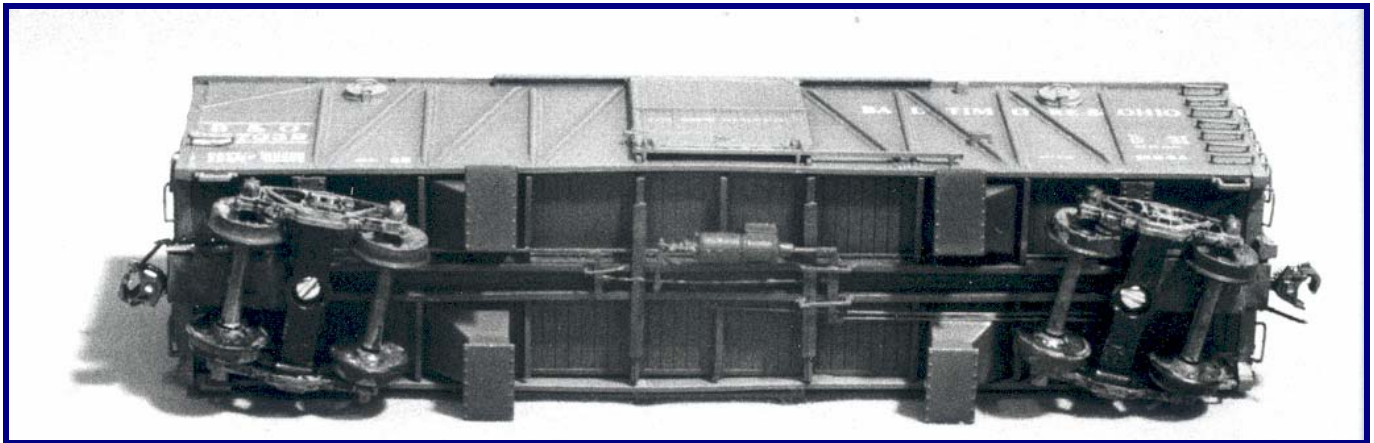


The grab irons that came with this kit are the straight type. The prototype photos of this car indicate they should be the drop type. Tichy Train Group offers these grabs as a separate item. These cars originally had KC brake system and this is included in the kit. For this B&O prototype, the discharge chutes are located under the third panel from each end of the car, not where the kit's directions indicate. Trucks that came with the kit are Bettendorf type and photographs of these cars show they were equipped with Andrews type, so these should be substituted. Detail Associates air hoses were added to each end of the car.



This car was painted with Modelflex light oxide red paint. Decals were provided with the kit. Additional lettering was added to indicate the built date and rebuilt date. The lettering on the door came from a camp car set and a covered hopper dimensioning set

from Champion Decal. The lettering is not complete or perfect but is the only thing close to the prototype. The hatches are painted with Poly-Scale aluminum paint. The underframe and axles are painted Modelflex flat black.



More Information

This article was reprinted with permission of the author. It first appeared in the Fourth Quarter 2000 issue of *The Sentinel*, the Society's quarterly magazine dedicated to the publication of articles and news items of historical significance. A follow-up

with additional prototype information appeared in the First Quarter 2003 issue of *The Sentinel*. Limited numbers of back issues are currently available through the Company Store, but in the near future the entire catalog will be available on CD for purchase.

Bill of Materials

Details Associates

- #6206 Air Hoses
- #2224 11" Grabirons
- #2505 .015" Brass Wire

#16120 Flat Black

Plastruct

#90850 .010" Styrene Rod

Evergreen Scale Models

- #9009 .005" Thick Styrene
- #2224 .015" Thick Styrene
- #8102 1"x2" HO Scale Strips
- #8203 2"x3" HO Scale Strips

Poly-Scale Paint

#414299 Flat Aluminum

Modelflex Paint

#1614 Light Tuscan Oxide Red

Tichy Train Group

- #4030 USRA Cement Boxcar Kit
- #3015 18" Drop Grabirons
- #3026 Andrews Trucks

HO SCALE COLOR POSITION LIGHT SIGNALS

BY FRAN GIACOMA

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.

The First Quarter 2006 issue of *The Sentinel* will include an article by Bryan Porter about how to build B&O Color Position Light (CPL) signals for use on model railroads. The article explains how to wire the circuits to make them work like the prototype. Fran

Giacoma's photos and captions give you some idea of how a well-thought-out signaling system can enhance operation on a layout.



Details at a typical signal location. The large box contains relays (to operate the signals), rectifiers (to change the AC from the power lines to DC for signal use and to charge the batteries) and a copy of the circuit plans for that location. The small box contains batteries that are used to operate the track circuits.



The eastbound dwarf signal for Track 1 at the Altamont Interlocking displaying "Medium Approach".



A "dummy" signal bridge at the east end of West Keyser interlocking. It defines the limit of the interlocking. Since the engineers operating the trains coming out of the staging yard cannot really see it, I have made it inoperable.

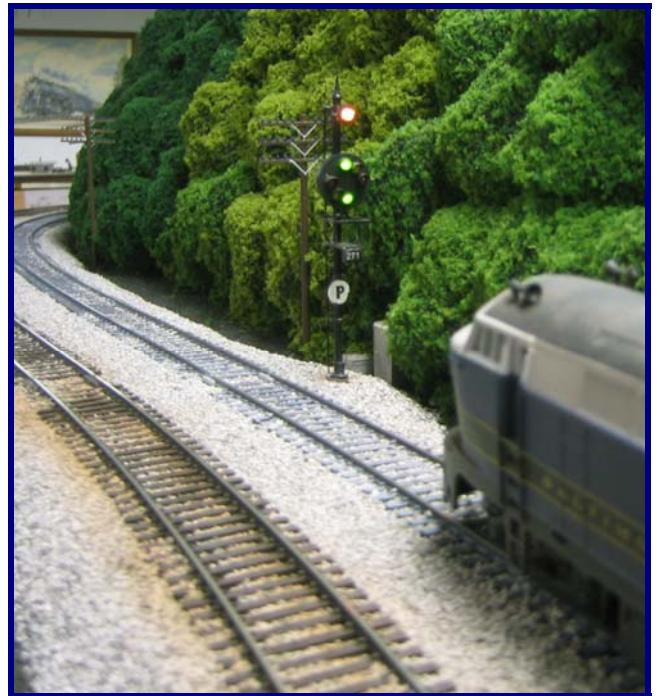


At the West End signal, a westbound empty coal train on Track 1 receives an "Approach Medium" indication. Note that this signal has a marker lamp offset to the right to display an "Approach Slow" indication. This is Rule 251 territory – each track is signaled in one direction only. The FA's on Track 2 are eastbound.

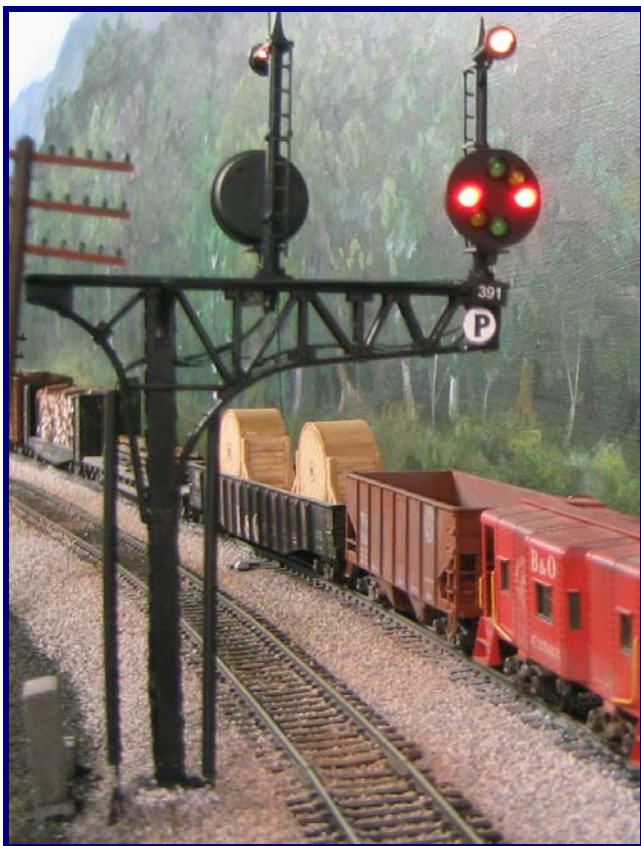


Looking eastbound at Streckers, an “Approach” indication is displayed for Track 2 on this cantilever style signal.

the signal carries a “P” on it making it a “Tonnage” signal. “Tonnage trains” do not have to stop when they get this aspect; they can proceed at Restricted Speed (per the 1953 B&O Operating Rule Book that I use).



Looking westbound at Big Curve, a “Clear” signal is displayed for the Sharks heading Train 97 on Track 1.



Looking westbound at Streckers, the Track 1 signal displays a “Stop and Proceed” indication. However, due to the uphill grade,



Looking eastbound at Altamont Interlocking, a set of GP7 helpers receives a ‘Stop & Proceed’ indication on the Track 2 home signal in order to tie on to the caboose of the Livestock Special. Since the Livestock Special was within the interlocking limits, the signal could not be normally cleared for the helpers and a “Call On” signal (Stop and Proceed or Restricting indication) was manually activated.



A switcher shoving its caboose gets a "Medium Approach" to cross over from Track 2 to Track 1 at the east end of Altamont Interlocking.



Looking east at West Keyser interlocking, the Track 2 signal

displays an "Approach" indication and the Track 1 signal displays a "Stop" indication as the West Keyser Local comes off Track 3 and heads west.



Looking east at Blaser interlocking. Note the 3 different types of signals. The dwarf is displaying a "Medium Clear" indication, while the two other signals display "Stop"

PLANNED FOR THE NEXT ISSUE

HO NW-2 Switcher with Sound

HO C-17 Express Car Conversion from a Walthers Troop Sleeper

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